

What is claimed is:

1. A sliding component formed by: filling an iron-based material powder and a copper-based material powder in a filling portion of a mold; compacting said iron- and copper-based material powders so as to form a green compact; and sintering said green compact, wherein:

said copper-based material powder contains flat powder particles of copper or copper alloy;

an average value of maximum projected areas of the flat powder particles is larger than that of maximum projected areas of the iron-based material powder particles; and

copper is allowed to segregate on a surface of said sliding component.

2. A sliding component formed by: filling iron-based material powder and copper-based material powder in a filling portion of a mold; compacting said iron- and copper-based material powders so as to form a green compact; and sintering said green compact, wherein:

said copper-based material powder contains flat powder particles of copper or copper alloy, said flat powder particles having a larger aspect ratio than said iron-based material powder particles; and

copper is allowed to segregate on a surface of said sliding component.

3. The sliding component according to claim 1, comprising a sliding portion having a surface coverage of copper greater than or equal to 60%.

4. The sliding component according to claim 3, wherein the surface coverage of copper is greater than or equal to 90%.

5. The sliding component according to claim 1, wherein said sliding component generates a concentration gradient in which a copper-to-iron ratio

thereof decreases from the surface of the sliding component toward an inside thereof while increasing the ratio of iron to copper.

6. The sliding component according to claim 3, wherein said one surface is a sliding surface formed in a cylindrical shape.

7. A method for manufacturing a sliding component, comprising the steps of: filling an iron-based material powder and a copper-based material powder into a filling portion of a mold; compacting said iron- and copper-based material powders so as to form a green compact; and sintering said green compact, wherein:

said copper-based material powder contains flat powder particles of copper or copper alloy;

an average value of maximum projected areas of the flat powder particles is larger than that of maximum projected areas of the iron-based material powder particles; and

said flat powder particles in the filling portion are allowed to segregate on a surface of said green compact.

8. A method for manufacturing a sliding component, comprising the steps of: filling an iron-based material powder and a copper-based material powder into a filling portion of a mold; compacting said iron- and copper-based material powders so as to form a green compact; and sintering said green compact, wherein:

said copper-based material powder contains flat powder particles of copper or copper alloy, said flat powder particles having a larger aspect ratio than said iron-based material powder particles; and

said flat powder particles in the filling portion are allowed to segregate on a surface of said green compact.

9. The method for manufacturing a sliding component according to claim 7, wherein the aspect ratio of each flat powder particle is greater than or equal to 10.

10. The method for manufacturing a sliding component according to claim 9, wherein the aspect ratio of each flat powder particle is in a range of 20 to 50.

11. The method for manufacturing a sliding component according to claim 9, including a step of segregating said flat powder particles toward the surface of said sliding component by applying vibration to said iron-based material powder and copper-based material powder filled in the filling portion of the mold.

12. The method for manufacturing a sliding component according to claim 7, wherein a ratio of said flat powder particles to the entire material powders is in a range of 20 to 70 % by weight .

13. The method for manufacturing a sliding component according to claim 9, wherein a ratio of said flat powder particles to the entire material powders is in a range of 20 to 70 % by weight .

14. The method for manufacturing a sliding component according to claim 12, wherein the ratio of said flat powder particles to the entire material powders is in a range of 20 to 40 % by weight .

15. The method for manufacturing a sliding component according to claim 7, wherein the average value of the maximum projected areas of the flat powder particles is at least 3 times as large as that of the maximum projected areas of the iron-based material powder particles.

16. The method for manufacturing a sliding component according to claim 9, wherein the average value of the maximum projected areas of the flat powder particles is at least 3 times as large as that of the maximum projected areas of the iron-based material powder particles.

17. The method for manufacturing a sliding component according to claim 12, wherein the average value of the maximum projected areas of the flat powder particles is at least 3 times as large as that of the maximum projected areas of the iron-based material powder particles.